15. The method of claim 13, wherein at least about 80% of the cells have at least seven of said characteristics.

16. The method of claim 13, wherein the histone deacetylase inhibitor is n-butyrate.

17. The method of claim 13, wherein the histone deacetylase inhibitor is propionic acid, isovaleric acid, or isobutyric acid.

18. The method of claim 13, wherein the histone deacetylase inhibitor is Trichostatin A.

19. The method of claim 13, comprising pre-differentiating the cells by forming embryoid bodies.

20. The method of claim 13, comprising pre-differentiating the cells by culturing in a medium containing dimethyl sulfoxide (DMSO), dimethylacetamide (DMA), hexmethylene bisacetamide, or another polymethylene bisacetamide.

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21. The method of claim 13, comprising further culturing the cells in a medium containing a cytokine or hormone selected from glucocorticoids, epidermal growth factor (EGF), insulin, TGF-α, TGF-β, fibroblast growth factor (FGF), hepatocyte growth factor (HGF), IL-1, IL-6, IGF-I, IGF-II, and HBGF-1.

22. The method of claim 21, wherein the cells are cultured in a medium containing at least three of said cytokines or hormones.

23. The method of claim 22, wherein the cells are cultured in a medium containing EGF, TGF-α, and HGF.

24. The method of claim 13, further comprising maintaining the differentiated cells by culturing them in a medium containing a histone deacetylase inhibitor.

25. The method of claim 13, further comprising maintaining the differentiated cells by culturing them in a medium containing n-butyrate.

26. The method of claim 13, wherein the pPS cells are human embryonic stem (hES) cells.

27. A method for maintaining cells differentiated from primate pluripotent stem (pPS) cells, comprising culturing the differentiated cells in a medium containing a histone deacetylase inhibitor, so that at least ~60% of the cultured cells maintain at least three of the following characteristics:
    - antibody-detectable expression of α_1-antitrypsin (AAT);
    - antibody-detectable expression of albumin;
    - absence of antibody-detectable expression of α-fetoprotein;
    - RT-PCR detectable expression of asialoglycoprotein receptor (ASGR);
    - evidence of glycogen storage;
    - evidence of cytochrome p450 activity;
    - evidence of glucose-6-phosphatase activity; or
    - the morphological features of hepatocytes.

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28. A method for producing differentiated cells from human embryonic stem (hES) cells, comprising culturing the hES cells or their progeny in a medium containing a histone deacetylase inhibitor, until at least ~60% of the cultured cells have at least three of the following characteristics:
    - antibody-detectable expression of α_1-antitrypsin (AAT);
    - antibody-detectable expression of albumin;
    - absence of antibody-detectable expression of α-fetoprotein;
    - RT-PCR detectable expression of asialoglycoprotein receptor (ASGR);
    - evidence of glycogen storage;
    - evidence of cytochrome p450 activity;
    - evidence of glucose-6-phosphatase activity; or
    - the morphological features of hepatocytes.